



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:
Sumar

Art Unit: 2623

Confirmation No.: 1298

Application No.: 09/619,264

Filed: July 19, 2000

For: PRINT MEDIA WITH EMBEDDED
MESSAGES FOR CONTROLLING
PRINTING

Examiner: M. DASTOURI

Date: January 29, 2004

CERTIFICATE OF MAILING

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**AMENDMENT ACCOMPANYING REQUEST
FOR CONTINUED EXAMINATION (RCE)**

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Sir:

Introductory Comments:

This Amendment accompanies a concurrently filed Request for Continued Examination and Information Disclosure Statement (IDS). This Amendment also addresses the May 29, 2003, Office Action.

Amendments to the Claims:

1. (previously presented): A paper medium including a surface having a steganographic message encoded thereon, the steganographic message being encoded through modulation of the surface's microtopolgy, the steganographic message including printer control information related to the paper medium that is readable by a machine from an image captured of at least a portion of the paper medium, and that is operable to control a printer so as to optimize print quality for physical characteristics of the paper medium.

A 2. (original): The paper medium of claim 1 wherein the printer control information includes one or more identifiers that are used to look up printer control information used to optimize printer operation for the paper medium.

3. (original): The paper medium of claim 1 wherein the printer control information includes paper characteristics information of the paper medium.

4. (currently amended): A paper medium carrying a steganographic message, the steganographic message including printer control information related to the paper medium that is readable by a machine from an image captured of at least a portion of the paper medium, and that is operable to control a printer so as to optimize print quality for physical characteristics of the paper medium, wherein the steganographic message is encoded in the form of a digital watermark, wherein the digital watermark does not betray the existence of the steganographic message.

5. (original): The paper medium of claim 4 wherein the digital watermark is embedded on the paper medium using an invisible ink.

6. (original): The paper medium of claim 4 wherein the digital watermark is repeated throughout at least a portion of the paper medium.

7. (previously presented): A printer system comprising:
an image sensor for capturing an image of print media;
a steganographic decoder for reading a steganographic message from the image of the print media, the message including printer control information for optimizing printer operation for the print media, wherein an optimization relates to print resolution; and
a printer control unit in communication with the decoder for receiving the printer control information and using the information to optimize print resolution to accommodate physical characteristics of the print media.

8. (original): The system of claim 7 wherein the image sensor is part of a scanning subsystem in a multifunction device having a printing subsystem and a scanning subsystem.

9. (currently amended): The system of claim 7 wherein the image sensor comprises at least one of a CCD array and a CMOS array.

10. (original): The system of claim 7 wherein the printer control unit uses the printer control information to look up operating parameters used to control the operation of a printer.

11. (original): The system of claim 7 including a computer connected to a printer; wherein the decoder comprises program code executing on the computer.

12. (original): The system of claim 7 wherein the decoder comprises a watermark decoder.

13. (currently amended): A method for adapting operation of an ink-jet printer to a type of print media comprising:

providing a digitally watermarked sheet of print media to the printer, wherein a digital watermark in the digitally watermarked sheet of print media includes an identifier, and wherein the identifier comprises at least some spread spectrum modulated binary bits;

capturing an image of at least a portion of the print media;

decoding the identifier from the image, wherein the identifier includes printer control information; and

using the printer control information to index corresponding printer operating parameters which relate to physical characteristics of the print media and adapting operation of the printer in accordance with the parameters.

14. (original): The method of claim 13 wherein steganographically decoding includes decoding the message from a watermark embedded in the print media.

15. (previously presented): A paper medium carrying a steganographic message, the steganographic message including printer control information related to at least a paper-bleeding coefficient of the paper medium, the printer control information being readable by a machine from an image captured of at least a portion of the paper medium, and the printer control information being operable to control a printer so as to optimize print quality for the paper-bleeding coefficient of the paper medium.

16. (previously presented): A method for adapting operation of a printer to a type of print media comprising:

capturing an image of at least a portion of a print media;

steganographically decoding a message from the image, the message including printer control information related to an optimal resolution for printing on the print media with respect to at least a physical characteristic of the print media; and

using the printer control information to adapt operation of the printer to print at the optimal resolution.

17-20 (canceled).

21. (previously presented): The method of claim 16, wherein the optimal resolution is determined based at least in part on an image to be printed to print media.